#### PROJECT DESCRIPTION

- I. GENERAL
- THIS PROJECT INVOLVES UPGRADING THE EXISTING SIGNAL HEADS WITH LED SIGNAL HEADS AND UPGRADING VIDEO DETECTION.
- II. INTERSECTION OPERATION
- 1. THE INTERSECTION IS TO OPERATE IN A NEMA 4-PHASE, FULLY-ACTUATED MODE.

#### GENERAL NOTES

- FOR FINAL PAVEMENT MARKINGS, REFER TO THE PAVEMENT MARKING PLANS, AS APPLICABLE; OTHER THAN THOSE DETAILED ON THE PLAN. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE STATE HIGHWAY ADMINISTRATION STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABLE EACH CABLE. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- THE CONTRACTOR SHALL MAINTAIN THE CONTINUOUS OPERATION OF ALL INTERCONNECT, VEHICULAR, PEDESTRIAN DETECTORS, AND LIGHTING DEVICES. IF ANY DEVICE IS DAMAGED BY THE CONTRACTOR, IT SHALL BE REPAIRED WITHIN 72 HOURS BY THE CONTRACTOR AT NO COST TO THE ADMINISTRATION AFTER NOTIFICATION BY THE ENGINEER.
- FOR THE EXISTING CONDUITS THAT ARE TO BE USED. THE CONTRACTOR SHALL REMOVE ALL INOPERABLE/UNUSED WIRES/CABLES. IF NECESSARY, THESE WIRES/CABLES SHALL BE REMOVED FROM CONDUITS NOT LABLED "USE EXISTING CONDUIT" IN ORDER TO COMPLETELY REMOVE THEM FROM THE CONDUIT SYSTEM HANDBOXES AND SIGNAL CABINET. NOTE THAT THIS WORK SHALL BE INCIDENTAL TO THE "REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT" ITEM.

#### CONTACTS

#### DISTRICT (THREE)

MR. JEFFREY WENTZ ASSISTANT DISTRICT ENGINEER - TRAFFIC 301-513-7318

MR. KEVIN NOWAK ASSISTANT DISTRICT ENGINEER - CONSTRUCTION 301-513-7336

MR. WAYNE MOWDY ASSISTANT DISTRICT ENGINEER - MAINTENANCE 301-513-7304

MR. AUGIE REBISH UTILITY ENGINEER 301-513-7350

#### OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF SR. CHIEF, TRAFFIC OPERATIONS 410-787-7630

MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS 410-787-7630

MR. ED RODENHIZER TEAM LEADER SIGNAL OPERATIONS 410-787-7650

MR. EUGENE BAILEY TEAM LEADER SIGN OPERATIONS

410-787-7670

MS. DARLENE EIDE SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE) 410-787-7668

### MONTGOMERY COUNTY

MR. KEITH LORD - MONTGOMERY COUNTY SIGNAL SHOP 301-279-1971

MR. KAMAL HAMUD TRAFFIC ENGINEER - MCTMC 240-777-8761

## EQUIPMENT LIST

# A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

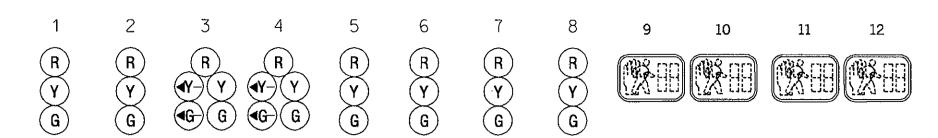
CAT CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000 973023	VIDEO INTERFACE EQUIPMENT FLAT SHEET ALUMINUM SIGNS CONSISTING OF:	E.A. SF	1 36
	SHIELD ASSEMBLY (30"X51")	EA	1
	SHIELD ASSEMBLY (48"X75")	EA	1

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

CAT CODE	UNITS	QUANTITY	DESCRIPTION
585621	L.F	370	12 INCH WHITE PERMANENT PREFORMED THERMO, PAVEMENT MARKING
585625	LF	130	24 INCH WHITE PERMANENT PREFORMED THERMO, PAVEMENT MARKING
800000	LS	1	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
800000	EA	1	RELOCATE EXISTING SIGNAL
801106	LF	17	WOOD SIGN SUPPORT 4 INCH X 6 INCH
813010	EΑ	1	BAND SIGN TO SUPPORT
813014	SF	11	INSTALL GROUND MOUNTED SIGNS
816001	EΑ	4	VIDEO DETECTION CAMERA
816005	EA	1	CONTROL CABLE, 250 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
816010	EA	3	CONTROL CABLE, 500 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
860284	EA	28	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861107	LF	100	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

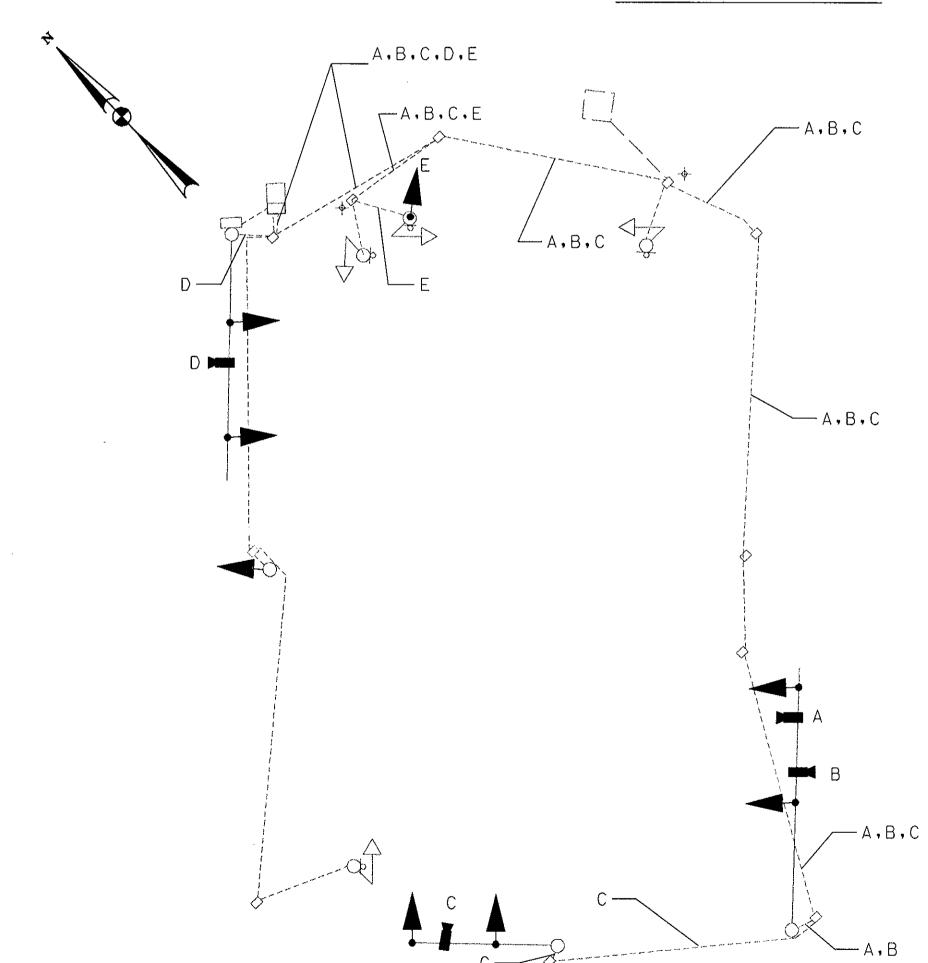
THE CONTRACTOR SHALL CONTACT KEITH LORD AT MONTGOMERY COUNTY SIGNAL SHOP 48 HOURS IN ADVANCE TO LOCATE ALL EXISTING SIGNAL EQUIPMENT.

# PHASE CHART



PHASE 1 AND 6	R	R	<b>←</b> G/G	<b>←</b> G/G	G	R	R	R	DW	DW	DW	DW	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
1 AND 6 CHANGE	R	R	<b>←</b> Y/G	←Y/G	G	R	R	R	DW	DW	DW	DW	
PHASE 2 AND 6	G	G	G	G	G	R	R	R	wĸ	wĸ	DW	DW	
PED CLEARANCE	G	G	G	G	G	R	R	R	FL/DW	FL/DW	DW	DW	
2 AND 6 CHANGE	Y	Y	Υ	Y	Y	R	R	R	DW	DW	DW	DW	
PHASE 4	R	R	R	R	R	G	G	G	DW	DW	DW	DW	}~
4 CHANGE	R	R	R	R	R	Y	Y	Υ	DW	DW	DW	DW	-i
PHASE 4 ALT	R	R	R	R	R	G	G	G	DW	DW	WK	WK	9   ⊩
PED CLEARANCE	R	R	R	R	R	G	G	G	DW	DW	FL/DW	FL⁄DW	
4 ALT CHANGE	R	R	R	R	R	Y	Y	Υ	DW	DW	DW	DW	1⊶i v
FLASHING OPERATION	FLY	FL/Y	FLY	FL/Y	FL/Y	FL⁄R	FL⁄R	FĽ⁄R	DARK	DARK	DARK	DARK	+

# WIRING DIAGRAM



VIDEO DETECTION LEAD-IN CABLE

5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION

MD 97 (GEORGIA AVE.) AND HEWITT AVE.

ASPEN HILL, MARYLAND GENERAL INFORMATION PLAN

SCALE NOT TO SCALE DATE JANUARY 2009 CONTRACT NO. MO 5755186



ABRA,WANG & ASSOCIATES, INC 1504 JOH AVENUE SUITE 160 BALTIMORE, MD 21227 (410) 737-6564 WWW.SABRA-WANG.COM

DESIGNED BY J. PALADUGU COUNTY \_\_\_ MONTGOMERY J. PALADUGU LOGMILE \_ DRAWN BY \_\_\_\_ 15009706.62 T.I.M.S. NO, CHECKED BY K. RINIKER TOD NO. \_\_ DRAWING **pSG** OF N003 SHEET NO. 34F OF 56F

PLOTTED: THURSDAY, JANUARY 15, 2009 AT 01:54 PM
FILE: R:\2006\58 BCS 2005-13D PREL ENG DES SVC WRA \$200K\TASK 2\DWG\SIGNALS\SIGNAL REBUILD\PGI-N003\_MD97.DGN